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PATENT
5500-90300

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Gregory William Smaus, Raghuram S.
Tupuri and Gerald D. Zuraski

Serial No.: 10/755,742

Filed: January 12, 2004

For: METHOD AND PROCESSOR
INCLUDING LOGIC FOR STORING
TRACES WITHIN A TRACE CACHE

Group Art Unit: 2185

Examiner: Kim, Daniel Y.

Atty. Dkt. No. 5500-90300

I hereby certify that this correspondence is being deposited
with the U.S. Postal Service as First Class Mail in an envelope
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Alexandria, VA 22313-1450, on the date indicated below:

Robert C. Kowert
Registered Representative

May 16 2006
Date

Signature

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicant requests consideration of ☒ the references listed on the attached Form PTO-1449 and/or ☒ the additional information identified below in paragraph 3.

- ☒ Pursuant to CFR §1.98(a)(2)(i), copies of the cited U.S. patents and/or U.S. patent application publications are not enclosed.
- ☒ A copy of each non-U.S. patent and/or non-U.S. patent application publication reference listed on the Form PTO-1449 is enclosed.
- ☐ The non-U.S. patent and/or non-U.S. patent application publication references listed on the Form PTO-1449 were previously cited in application serial no. _____ to which the captioned application is seeking priority under 35 U.S.C. §120; therefore, a copy of each reference is not enclosed.

1. This Information Disclosure Statement is submitted:

- a. ☐ within 3 months of the filing date of a national application other than a continued prosecution application under § 1.53(d);
- ☐ within 3 months of the date of entry of the national stage as set forth in § 1.491 in an International application;

- ☐ before the mailing date of a first Office Action on the merits; or
- ☐ before the mailing of a first Office Action after the filing of a request for continued examination under § 1.114.
- b. ☒ after the events of above paragraph 1a and prior to the mailing date of a final Office Action or Notice of Allowance, and thus: ☐ the certification of paragraph 2 below is provided, or ☒ a fee of \$180.00 (is authorized below).
- c. ☐ after the mailing date of a final Office Action or a Notice of Allowance and prior to payment of the issue fee, and thus: the certification of paragraph 2 below is provided and a fee of \$180.00 is enclosed.

2. It is hereby certified:

- ☐ that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the Statement, or
- ☐ that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in § 1.56 (c) more than three months prior to the filing of the Statement.

3. ☒ Consideration of the following additional information (including any co-pending or abandoned U.S. applications, prior uses and/or sales, etc.) is requested:

U.S. Application Serial No. 10/615,506 (5500-79500)

U.S. Application Serial No. 10/700,033 (5500-91600)

U.S. Application Serial No. 10/726,962 (5500-88700)

U.S. Application Serial No. 10/676,437 (5500-88800)


4. For each non-English language reference listed on the attached Form PTO-1449:

- ☐ reference is made to an English language translation submitted herewith, and/or
- ☐ reference is made to a foreign patent office search report (in the English language) submitted herewith, and/or
- ☐ reference is made to an English language translation of a foreign patent office search report submitted herewith, and/or
- ☐ reference is made to the concise explanation contained in the specification of the present application at page(s) _____, and/or
- ☐ reference is made to the concise explanation set forth below:

5. ☐ Applicant also offers the following comments for the Examiner's consideration:
6. ☐ Also enclosed is a copy of a foreign search report citing these references.
7. ☐ The listed documents were brought to the attention of the Applicant(s) after payment of the issue fee in the captioned case. The documents were cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. Applicant(s) request this Information Disclosure Statement and attached Form PTO-1449 be placed in the file of the captioned application.
8. ☐ Applicant(s) requests that the Information Disclosure Statement and attached Form PTO-1449 and references, which are being filed before the grant of the patent and pursuant to 37 C.F.R. § 1.97(i), be placed in the file of the captioned application.

If any required fees are missing, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. Deposit Account No. 50-1505/5500-90300/RCK.

Respectfully submitted,



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Date: May 16, 2006

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Substitute for form 1449/PTO Modified

Complete if Known
**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Use as many sheets as necessary)

Sheet 1 of 2

Application Number 10/755,742
 Confirmation No.: 1112
 Filing Date: January 12, 2004
 First Named Inventor: Gregory William Smaus
 Art Unit: 2185
 Examiner Name: Kim, Daniel Y
 Attorney Docket Number: 5500-90300

U. S. PATENT DOCUMENTS

| Examiner Initials* | Cite No. ¹ | Document Number | Publication Date MM- DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|-----------------------|--------------------------|--------------------------------|------------------------------------|--|--|
| | | Number-Kind Code (if known) | | | |
| | | US-2004/0143721 | 7/04 | Pickett, et al. | |
| | | US-6,247,121 | 6/01 | Akkary, et al. | |
| | | US-3,896,419 | 7/75 | Lange, et al. | |
| | | US-5,381,533 | 1/10/95 | Peleg | |
| | | US-6,449,714 | 9/10/02 | Sinharoy | |
| | | US-6,339,822 | 1/15/02 | Miller | |
| | | US-6,256,727 | 7/3/01 | McDonald | |
| | | US-6,185,675 | 2/6/01 | Kranich, et al. | |
| | | US-6,823,428 | 11/23/04 | Rodriguez, et al. | |
| | | US-6,167,536 | 12/00 | Moann | |
| | | US-6,357,016 | 3/02 | Rodgers, et al. | |
| | | US-2002/0144101 | 10/02 | Wang, et al. | |
| | | US-2003/0023835 | 1/03 | Kalafatis, et al. | |
| | | US-2004/0083352 | 4/04 | Lee | |
| | | US-2004/0193857 | 9/04 | Miller, et al. | |
| | | US-2005/0125632 | 6/05 | Alsup, et al. | |

FOREIGN PATENT DOCUMENTS

| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear | Check if English Translation is attached |
|-----------------------|--------------------------|---|--------------------------------|---|--|---|
| | | Country Code-Number-Kind Code (if known) | | | | |
| | A1 | GB 2 281101 | 4/23/03 | | | <input type="checkbox"/> |
| | A2 | EP 0 957 428 | 11/17/99 | | | <input type="checkbox"/> |
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| Examiner Signature | | Date Considered | |
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|--|--------------------------|--|---|
| Substitute for form 1449/PTO Modified | | Complete if Known | |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i> | | Application Number | 10/755,742 |
| | | Confirmation No.: | 1112 |
| Sheet 2 of 2 | | Filing Date: | January 12, 2004 |
| | | First Named Inventor: | Gregory William Smaus |
| | | Art Unit: | 2185 |
| | | Examiner Name: | Kim, Daniel Y |
| | | Attorney Docket Number: | 5500-90300 |
| NON PATENT LITERATURE DOCUMENTS | | | |
| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, (page(s), volume-issue number(s), publisher, city and/or country where published. | Check if English Translation is attached |
| | A3 | Yuan Chou, et al., "Instruction Path Coprocessors," March 2000, pp. 1-24. | <input type="checkbox"/> |
| | A4 | Friendly, et al., "Putting the Fill Unit to Work: Dynamic Organizations for Trace Cache Microprocessors," Dept. of Electrical Engineering and Computer Sciences, The Univ. of Michigan, December 1998, 9 pages. | <input type="checkbox"/> |
| | A5 | Bryan Black, et al., "Turboscalar: A High Frequency High IPC Microarchitecture," Dept. of Electrical and Computer Engineering, Carnegie Mellon Univ., June 2000, pp. 1- | <input type="checkbox"/> |
| | A6 | Merten, et al., "An Architectural Framework for Run-Time Optimization," June 2001, pp. 1-43. | <input type="checkbox"/> |
| | A7 | Jourdan, et al., "Increasing the Instruction-Level Parallelism through Data-Flow Manipulation," Intel, 11 pages. | <input type="checkbox"/> |
| | A8 | Hinton, G., et al., "A 0.18-MUM CMOS IA-32 Processor with a 4-GHZ Integer Execution Unit," IEEE Journal of Solid-State Circuits, Vol. 36, No. 11, November 2001, pages. 1617-1627. | <input type="checkbox"/> |
| | A9 | Sanjay J. Patel, et al., "replay: A Hardware Framework for Dynamic Optimization," IEEE, Vol. 50, No. 6, June 2001, pp. 590-608. | <input type="checkbox"/> |
| | A10 | Jacobson, et al., "Instruction Pre-Processing in Trace Processors," IEEE Xplore, January 1999, 6 pages. | <input type="checkbox"/> |
| | A11 | Bryan Black, et al., "The Block-Based Trace Cache," IEEE, 1999, pp. 196-207. | <input type="checkbox"/> |
| | A12 | Rotenberg, et al., "Trace Cache: a Low Latency Approach to High Bandwidth Instruction Fetching," IEEE, 1996, pp. 24-34. | <input type="checkbox"/> |
| | A13 | Grant Braught, "Clas #21-Assemblers, Labels & Pseudo Instructions," Dickenson College, Fall Semester 2000, 6 pages. | <input type="checkbox"/> |
| | A14 | Patterson, et al., "Computer Architecture A Quantitative Approach," Second Edition, Morgan Kaufmann Publishers, Inc., 1996, pp. 271-278 | <input type="checkbox"/> |
| | A15 | Palmer, et al., "Fido: A Cache That Learns to Fetch," Proceedings of the 17 th International Conference on Very Large Data Bases, Barcelona, September 1991, pp. 255-264. | <input type="checkbox"/> |
| | A16 | Chen et al., "Eviction Based Cache Placement for Storage Caches," USENIX 2003 Annual Technical Conference, (13 pages) | <input type="checkbox"/> |
| | | | <input type="checkbox"/> |

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| Examiner Signature | | Date Considered | |
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